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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/006,480      | 12/06/2001  | Mark John McGrath    | 282491US8X          | 3228             |

22850            7590            11/19/2007  
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1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

CHOWDHURY, NIGAR

ART UNIT

PAPER NUMBER

2621

|                   |               |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
| 11/19/2007        | ELECTRONIC    |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/006,480             | MCGRATH ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Nigar Chowdhury        | 2621                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 27 August 2007.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 13,14,16,17,19,20 and 22-25 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 13,14,16,17,19,20 and 22-25 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 06 December 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.<br>_____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Response to Arguments***

Applicant's arguments filed on 08/27/2007 have been fully considered but they are not persuasive.

1. In re page 8, applicant argues that Fuller discloses a metadata engine for use in a digital capture device but fails to disclose "deriving sub-shot segmentation data from color distribution data" as recited in claim 13

In response, the examiner respectfully disagrees. Fuller et al discloses from Col. 2 line 53-Col. 3 line 8, Col. 6 lines 51-57, and col. 9 lines 34-39, that "Metadata generated may include:

Image Feature Vectors

Keyframe storyboards

Various text attributes (closed-captioned (CC) text, teletext, time/date, media properties such as frame-rates, bit-rates, annotations, and so forth)

Speech-to-text & keyword spotting

Speaker identification (ID)

Audio classifications & feature vectors

Face identification/recognition

Optical Character Recognition (OCR)

Other customized metadata via extensibility mechanisms:

GPS data; camera position & properties; any external collateral data; and so forth.", "The VIR Image Engine....the mathematical quantities describe the color,

shapes, and textures found in the image”, and “A...metadata to be checked is one or more external sensors, as determined at a decision...GPS receivers, light meters, color temperature meters....” Fuller discloses that metadata extraction unit has image feature vector and audio feature vector data to capture images in real time. The VIR Engine looks at the pixel data in the images and analyzes the data with respect to visual attributes such as color. Metadata which is known as a feature vector that describes the image content in terms of mathematical quantities to describe the color, shapes, and textures found in the image (claim 13).

2. Claim 19 is rejected for the same reason as discussed in the paragraph 1.
3. In re page 9, applicant argues that Fuller fails to disclose “the co-occurrence of a face and audio identified as speech which is flagged as potentially representing an interview” as recited in claim 22.

In response, the examiner respectfully disagrees. Fuller discloses from col. 1 lines 59-64, and col. 2 line 53-Col. 3 line 8 that “Content-based metadata: information extracted automatically by analyzing the audiovisual signal and extracting properties from it, such as keyframes, speech-to-text, speaker ID, visual properties, face identification/recognition, optical character recognition (OCR), and so forth” and “Metadata generated may include:

Image Feature Vectors

Keyframe storyboards

Various text attributes (closed-captioned (CC) text, teletext, time/date, media properties such as frame-rates, bit-rates, annotations, and so forth).

Speech-to-text & keyword spotting

Speaker identification (ID)

Audio classifications & feature vectors

Face identification/recognition

Optical Character Recognition (OCR)

Other customized metadata via extensibility mechanisms:

GPS data; camera position & properties; any external collateral data; and so forth." Fuller discloses speech-to-text, audio classification & feature vectors, face identification/recognition to identify facial images with audio signal.

4. Applicant's arguments with respect to claim 16-17 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 13, 14, 19, 20, 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,833,865 by Fuller et al.

6. Regarding **claim 13**, a camera-recorder apparatus comprising: (Fig. 1, Col. 1 line 29-31):

- An image capture device operable to capture a plurality of video images (Col. 2 line 53-55)
- A storage medium by which video images are stored for later retrieval (Col. 2 line 1-3)
- A feature extraction unit operable to derive image feature vector data (Col. 2 lines 62-Col. 3 lines 8) from image content of at least one of video images substantially in real time at capture of video images, image feature vector data (Col. 2 line 5-8) including color distribution data associated with respective images (Col. 6 lines 51-57, Col. 9 lines 35-39)
- A metadata extraction unit operable to derive image property data from image feature vector data substantially in real time at capture of video images, image property data being associated with respective images or groups of images and including sub shot segmentation data (Col. 2 line 53-Col. 3 line 8, Col. 4 lines 36-46)
- A data path by which camera-recorder apparatus is operable to transfer derived image property data to an external data processing apparatus (Col. 3 line 6-8, Col. 6 line 24-36).

7. Regarding **claim 14**, the apparatus in which image feature vector data includes face recognition data (Col. 2 line 62-Col. 3 line 8)

8. Regarding **claim 19**, a camera-recorder apparatus comprising: (Fig. 1, Col. 1 line 29-31):

- An image capture device operable to capture a plurality of video images (Col. 2 line 53-55)
- A storage medium by which video images are stored for later retrieval (Col. 2 line 1-3)
- A feature extraction unit operable to derive image feature vector data (Col. 2 lines 62-Col. 3 lines 8) from image content of at least one of video images substantially in real time at capture of video images, image feature vector data (Col. 2 line 5-8) including color distribution data associated with respective images (Col. 6 lines 51-57, Col. 9 lines 35-39)
- A metadata extraction unit operable to derive image property data from image feature vector data substantially in real time at capture of video images, image property data being associated with respective images, image property data includes a representative key frame derived from color distribution data (Col. 6 lines 51-57, Col. 9 lines 35-39) and indicative of predominant overall content of video images (Col. 2 line 53-Col. 3 line 8, Col. 4 lines 36-46. By the definition of the predominant, face recognition and speaker id is most common in the video images)

- A data path by which camera-recorder apparatus is operable to transfer derived image property data to an external data processing apparatus (Col. 3 line 6-8, Col. 6 line 24-36).

9. **Claim 20** is rejected for the same reason as discussed in corresponding claim 17 above.

10. Regarding **claim 22**, a camera-recorder apparatus comprising: (Fig. 1, Col. 1 line 29-31):

- An image capture device operable to capture a plurality of video images (Col. 2 line 53-55)
- A storage medium by which video images are stored for later retrieval (Col. 2 line 1-3)
- A feature extraction unit operable to derive image feature vector data (Col. 2 lines 62-Col. 3 lines 8) from image content of at least one of video images substantially in real time at capture of video images, image feature vector data being associated with respective images (Col. 2 line 5-8)
- A metadata extraction unit operable to derive image property data from image feature vector data substantially in real time at capture of video images, image property data being associated with respective images or groups of images (Col. 2 line 53-Col. 3 line 8, Col. 4 lines 36-46)

- A data path by which camera-recorder apparatus is operable to transfer derived image property data to an external data processing apparatus (Col. 3 line 6-8, Col. 6 line 24-36)

In which

- Camera-recorder apparatus is operable to capture an audio signal associated with video images (Col. 3 lines 15-17)
- Feature extraction unit is operable to derive audio feature vector data identifying speech content for portions of audio signal associated with at least one of video images (Col. 2 line 62-Col. 3 line 8, Fig. 1 (200), Col. 5 lines 22-31)
- Image property data includes interview detection data indicative of an interview sequence of video images (interview can be any video image with audio, Col. 5 lines 22-31), video images of interview sequence including identified facial images co-occurring with respect to audio signal that is associated with video images of interview sequence comprising speech. (Col. 2 line 62-Col. 3 line 8)

11. **Claims 23, 24** are rejected for the same reason as discussed in corresponding claim 17 above.

12. Regarding **claim 25**, the apparatus according to claim 24, in which audio feature vector data comprises speech detection data and metadata extraction unit is operable

to derive interview detection data from face recognition data and speech detection data  
(Col. 2 line 62-Col. 3 line 8)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,833,865 by Fuller et al. in view of US 5,893,095 by Jain et al.
14. Regarding **claim 16**, Fuller discloses a camera-recorder apparatus comprising:  
(Fig. 1, Col. 1 line 29-31):

- An image capture device operable to capture a plurality of video images  
(Col. 2 line 53-55)
- A storage medium by which video images are stored for later retrieval  
(Col. 2 line 1-3)
- A feature extraction unit operable to derive image feature vector data (Col. 2 lines 62-Col. 3 lines 8) from image content of at least one of video images substantially in real time at capture of video images, image feature vector data (Col. 2 line 5-8) including color distribution data associated with respective images (Col. 6 lines 51-57, Col. 9 lines 35-39)

- A metadata extraction unit operable to derive image property data from image feature vector data substantially in real time at capture of video images, image property data being associated with respective images or groups of images, image property data including activity measure data indicative of change of image content or audio content between video images (Col. 2 line 53-Col. 3 line 8, Col. 4 lines 36-46. There is face recognition and speaker id to detect change)
- A data path by which camera-recorder apparatus is operable to transfer derived image property data to an external data processing apparatus (Col. 3 line 6-8, Col. 6 line 24-36).

Fuller fails to disclose image property data including activity measure data derived from a variance of color distribution data.

Jain discloses image property data including activity measure data derived from a variance of color distribution data (col. 6 lines 34-43).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the proposed combination of Fuller's system to include a image property data, as taught by Jain, for including activity measure data derived from a variance of color distribution data for the advantage of providing proper image with audio data to a viewer.

15. Regarding **claim 17**, Fuller discloses in which image feature vector data includes face recognition data (Col. 2 line 62-Col. 3 line 8)

**Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nigar Chowdhury whose telephone number is 571-272-8890. The examiner can normally be reached on 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NC  
11/08/2007

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